In 7/roof

Instructions

Read the problem situation described on the next page. Study the maps until you understand the location of the miners and equipment in the problem. Next, answer each of the 9 questions. Do them one at a time. Don't jump ahead, but you may look back to earlier questions and answers. For the first question, select all of the answers that you think are correct. For the rest of the questions, choose only one answer unless you are directed to "Try again!"

After you have selected a choice to a question, look up its number on the answer sheet. Select your answer to each question by rubbing the special pen between the brackets on the answer sheet. A hidden message will appear and tell you if you are right. When you have finished, you will learn how to score your performance.

READEX FICHE best copy available

I 28.2:

Roof Fall Entrapment Exercise

Background

A continuous miner is being used in a 78 inch (6.5 ft) seam.
Pillars are being recovered.
It is near the end of the shift.
The preshift examiner for the second shift will soon be on the section.
Three unplanned roof falls have occurred on this section.
Times and locations of roof falls are shown in Figure 1.

Problem

You are a shuttle car operator. The preshift examiner reported that the posts in the intersection of the number 6 entry (E6) and crosscut number 39 (C39) were bent. At the beginning of your shift, more posts were added and crossbars were installed. Since then, the shift has gone as usual.

You are tramming out your loaded car and find that it won't fit under the new crossbars. (It cleared the bars easily before.) You see that the roof is working in the intersection.

The foreman is outby the intersection. You yell to him that the top is working. He instructs you to go and tell the other miners to come out, while he stays to watch the roof conditions. You return to the face in your shuttle car and tell everyone that the boss says to get out.

After studying the map on page 3, turn the page and answer the first question.

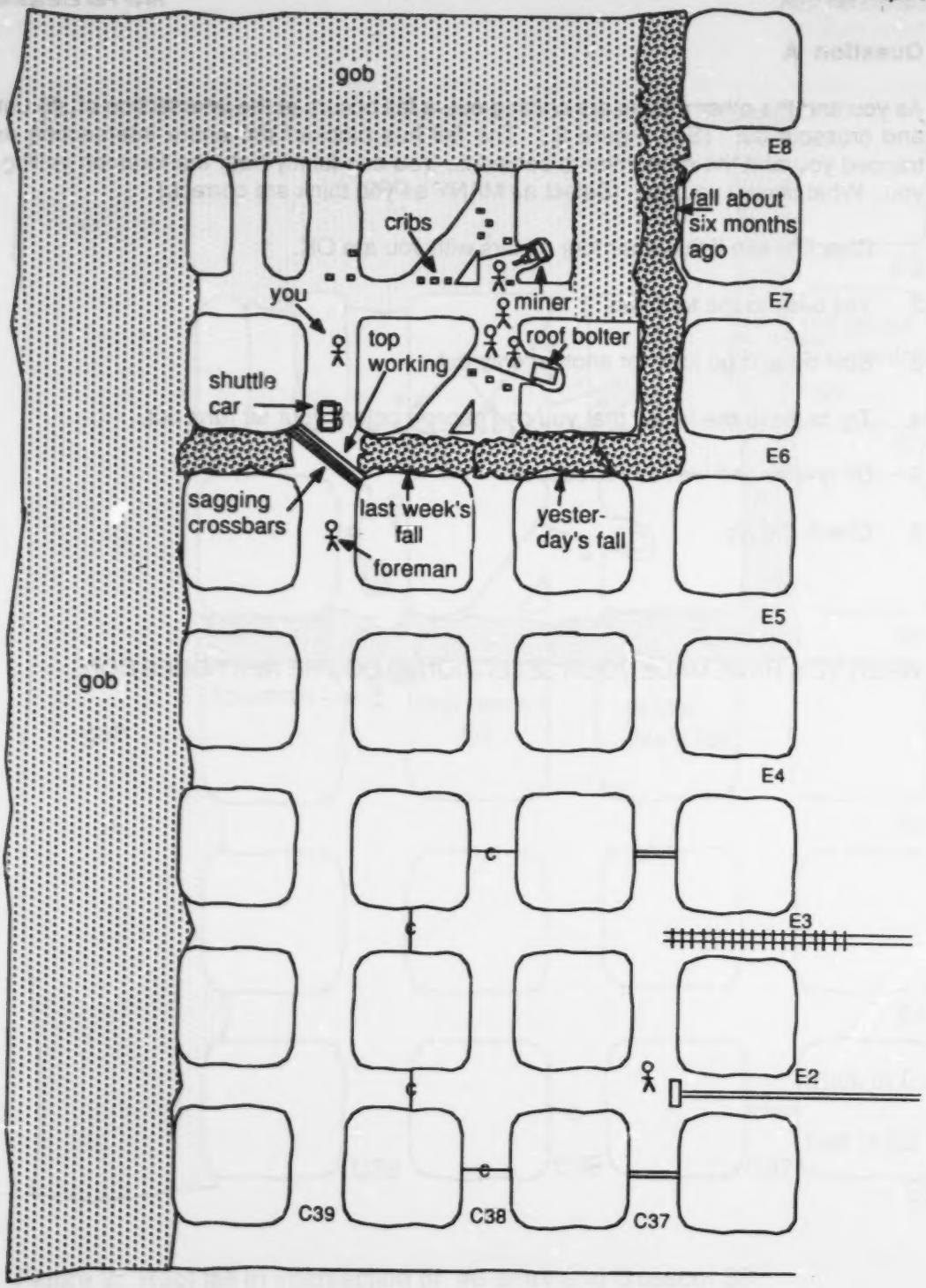

Figure 1: Intersection of 6 entry and crosscut 39

Question A

As you and the other miners are coming out, a fall occurs at the intersection of #6 entry and crosscut 39. (See Figure 2.) The fall has blocked the entire intersection and trapped you and the other miners behind it. You can faintly hear the foreman yelling to you. What should you do? (Select as MANY as you think are correct.)

1. Check to see if the other four miners with you are OK.
2. Yell back to the foreman.
3. Split up and go look for another way out.
4. Try to move the fall so that you can escape before your air runs out.
5. Sit quietly and wait to be rescued.
6. Check the top.

WHEN YOU HAVE MADE YOUR SELECTION(S) DO THE NEXT QUESTION.

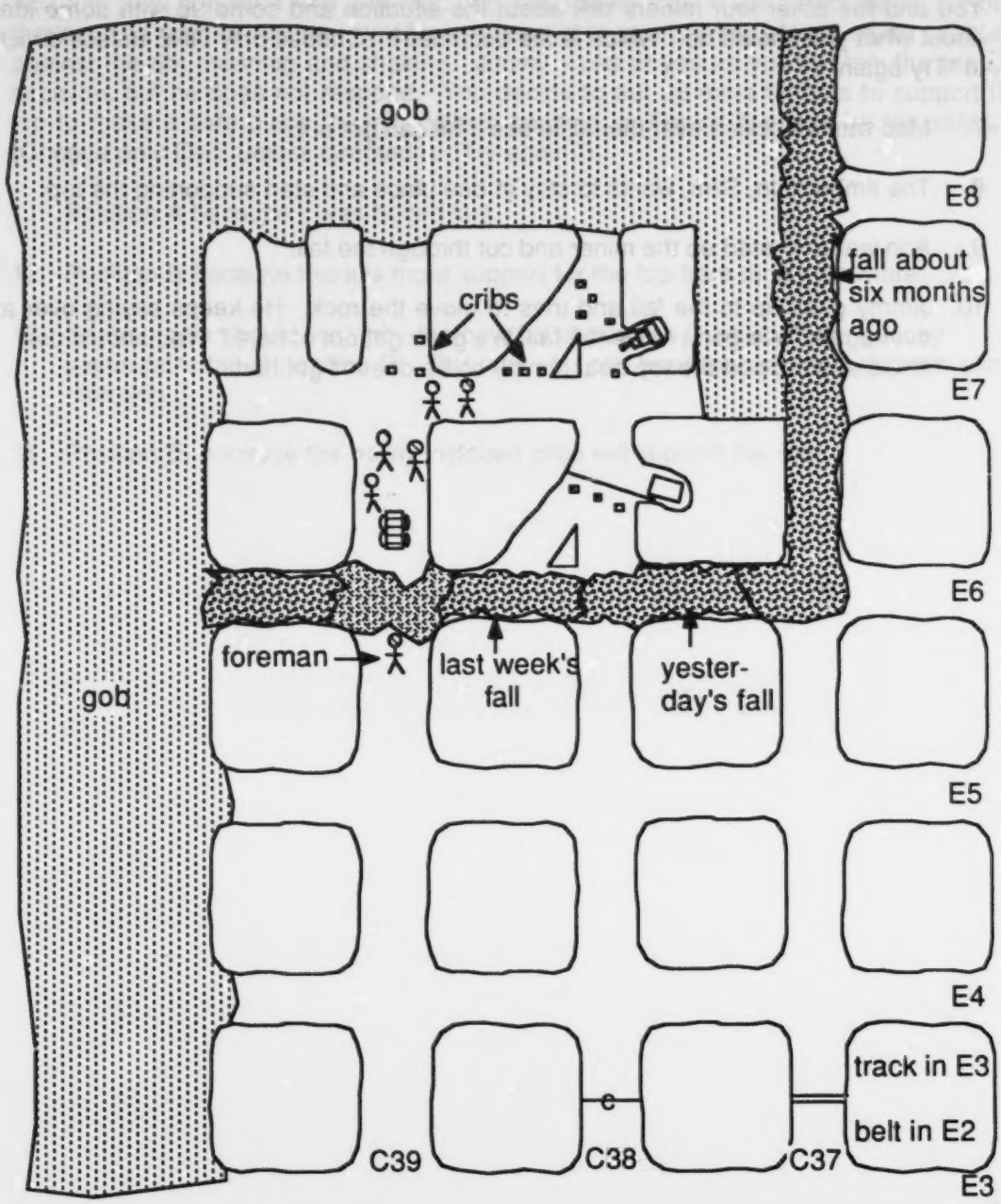

Figure 2: Roof fall in intersection of #6 entry and crosscut 39

Question B

You and the other four miners talk about the situation and come up with some ideas about what you should do. Which is the best idea? (Choose only ONE unless directed to "Try again!")

7. Mac wants to climb over the fall to see if he can get out.

8. The timberman, Slim, wants to stay in one place and start supporting the top.

9. Ann wants to start up the miner and cut through the fall.

10. Jimmy goes up to the fall and tries to move the rock. He keeps saying over and over again, "We gotta move the fall. We gotta get out of here." You should use timbers to support the top near Jimmy so he doesn't get hurt.

Question C

You and Slim convince Ann and Mac that you should stay in the safest place, support the top, and wait for rescue. You have managed to quiet Jimmy. He is sitting slumped against the rib, moaning and shaking. Jimmy looks at you as you tell him the group's decision, but he does not respond. You decide to put up extra timbers to support the top to make a safe place to wait. Which position, in Figure 3, would be the safest? (Choose only ONE unless directed to "Try again!")

11. Position A because it was bolted last.

12. Position B because there is more support for the top here than elsewhere.

13. Some of you should stay inby the new fall at position C while others go inby yesterday's fall at position D. This way you can hear rescue attempts from either direction.

14. Position E, because the newly installed cribs will support the roof.

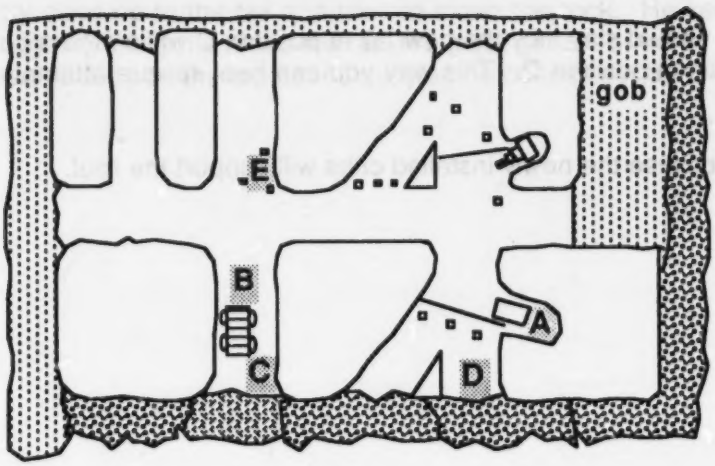

Figure 3: Possible positions of safety

Question D

After thinking about your options, you set additional roof supports and wait for rescue at position B. (See Figure 3.) What should you do while you wait? (Choose only ONE unless directed to "Try again!")

15. Send one or two people at a time to remove as much of the fall as they can while staying under supported top.

16. Sit quietly to conserve your air.

17. Stay together under the extra support you put up. Talk to each other, being sure to include Jimmy in the conversation.

18. Signal to the miners outby the fall by banging on a roof bolt with a timber.

Question E

When the fall first occured and trapped you and your buddies, the foreman yelled to you. You yelled back and said you and the others were OK. What should the foreman have done next? (Choose only ONE unless directed to "Try again!")

19. **Gone to another section to get help.**

20. **Phoned outside and reported the roof fall.**

21. **Supported the roof near the fall.**

22. **Started to remove the rock to rescue the miners.**

Question F

Immediately after the fall, the foreman called outside and reported the details and asked for assistance. He said the top looked bad. While he was at the phone, he also sent the beltman to another section to get help. What should the foreman have done next? (Choose only ONE unless directed to "Try again!")

23. Gone back to the fall area and waited for help to arrive.

24. Gone back to the fall and started removing rock from the intersection.

25. Gone back to the fall, gathered materials, talked to the trapped miners, and started supporting the roof outby the fall.

26. Gone to yesterday's fall to see if any of the miners were inby that fall.

27. Gone back to the fall, gathered roof support materials, talked with the trapped miners, and developed a plan.

Question G

While the foreman gathers roof support materials outby the fall, he yells to you that help is on the way. You yell back that you are all OK. You and the other miners are waiting at position B where you have set extra timbers around yourselves. (See Figure 3.) Now you hear and see a second fall on top of the first one. The fall extends about three feet further up crosscut 39 toward your position. You immediately yell to the foreman, but there is no response. What should you do now? (Choose only ONE unless directed to "Try again!")

28. Start digging your way out before it all comes down.

29. Go to yesterday's fall at position D. Yell and see if anyone can hear you through the fall.

30. Stay where you are, under roof support, at position B.

31. Leave position B. Move back to position E and get in between the cribs.

Question H

You have been trapped for 3 hours. You are waiting at position B with extra timbers set around yourselves. Jimmy has calmed down. Everyone is still feeling OK. You are all breathing comfortably. You hear miners outby the fall working to free you. The sound gets louder and you see a light shine through the top edge of the fall near the right rib. What should you do? (Choose only ONE unless directed to "Try again!")

32. Have one person go to the hole and check to see if it is possible to crawl through.

33. You and the other trapped miners should go to the fall and make the hole bigger from the inby side of the fall so that you can leave as soon as possible.

34. Pull the timbers around position B where you are waiting and start supporting the top just inby the hole through the fall.

35. Wait at position B until the rescuers have advanced all the way through the fall area and set supports inby the fall. Talk with the rescuers while you wait.

Question I

This exercise is based on an actual case. Fortunately, no one was injured, although the miners were trapped for several hours. The mine management and the miners should not have allowed this dangerous situation to develop. List all the unsafe mining practices and violations of state and federal laws that occurred in this problem. (Write on the blanks on the answer sheet.)

END OF PROBLEM

Scoring your performance

1. Count up the total number of responses you colored in that were marked "correct". Write this number in the first blank on the answer sheet.

2. Count the total number of incorrect responses you colored in. Subtract this number from 25. Write the difference in the second blank on the answer sheet.

3. Add the numbers on the first and second blanks. This is your score.

The best possible score of 35 results from selecting all the correct answers and no wrong answers. The worst possible score of zero results from selecting all the wrong answers and no correct answers.